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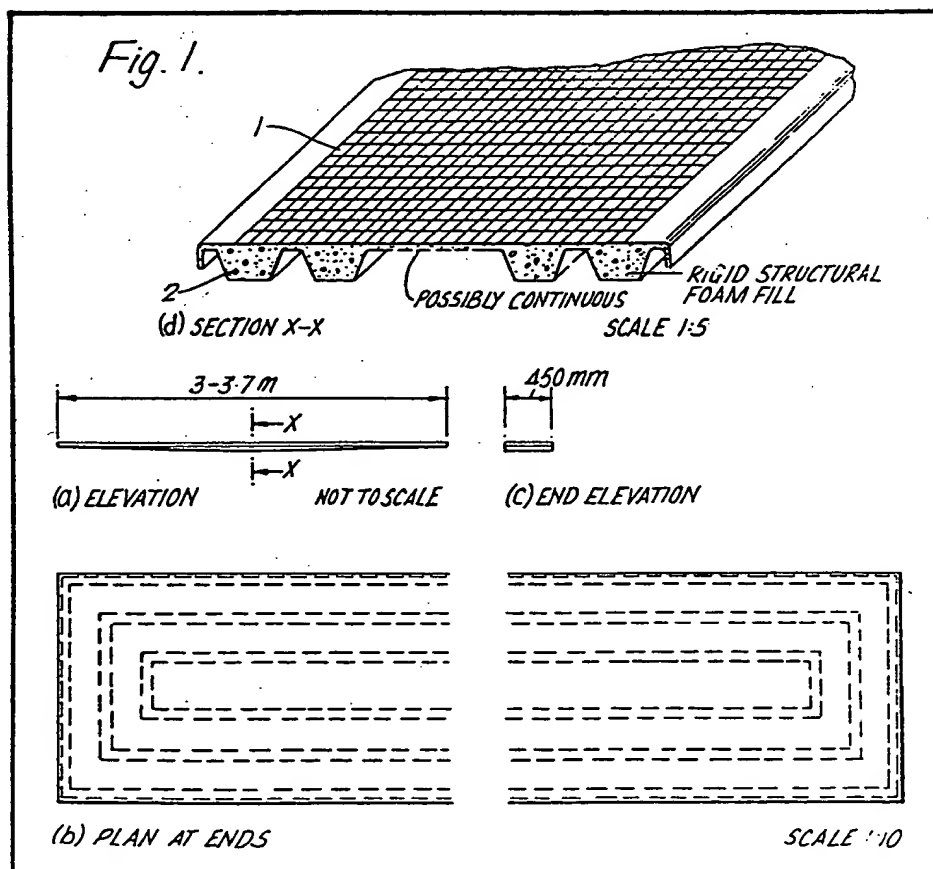
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(71) Applicant
Richard Towning Hill,
18, Great George Street,
Bristol BS1 5RH
(72) Inventor
Richard Towning Hill
(74) Agent
Gallafent & Co.,
8, Staple Inn, London
WC1V 7QH

(54) Building Boards

(57) Building boards are formed of glass fibre reinforced plastics. Each

board consists of a channel section (1) forming the supporting surface of the board and enclosing one or more multi-channel sections (2) which give the board its strength.



The drawings originally filed were informal and the print here reproduced is taken from a later filed formal copy.

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1/2

Fig. 1.

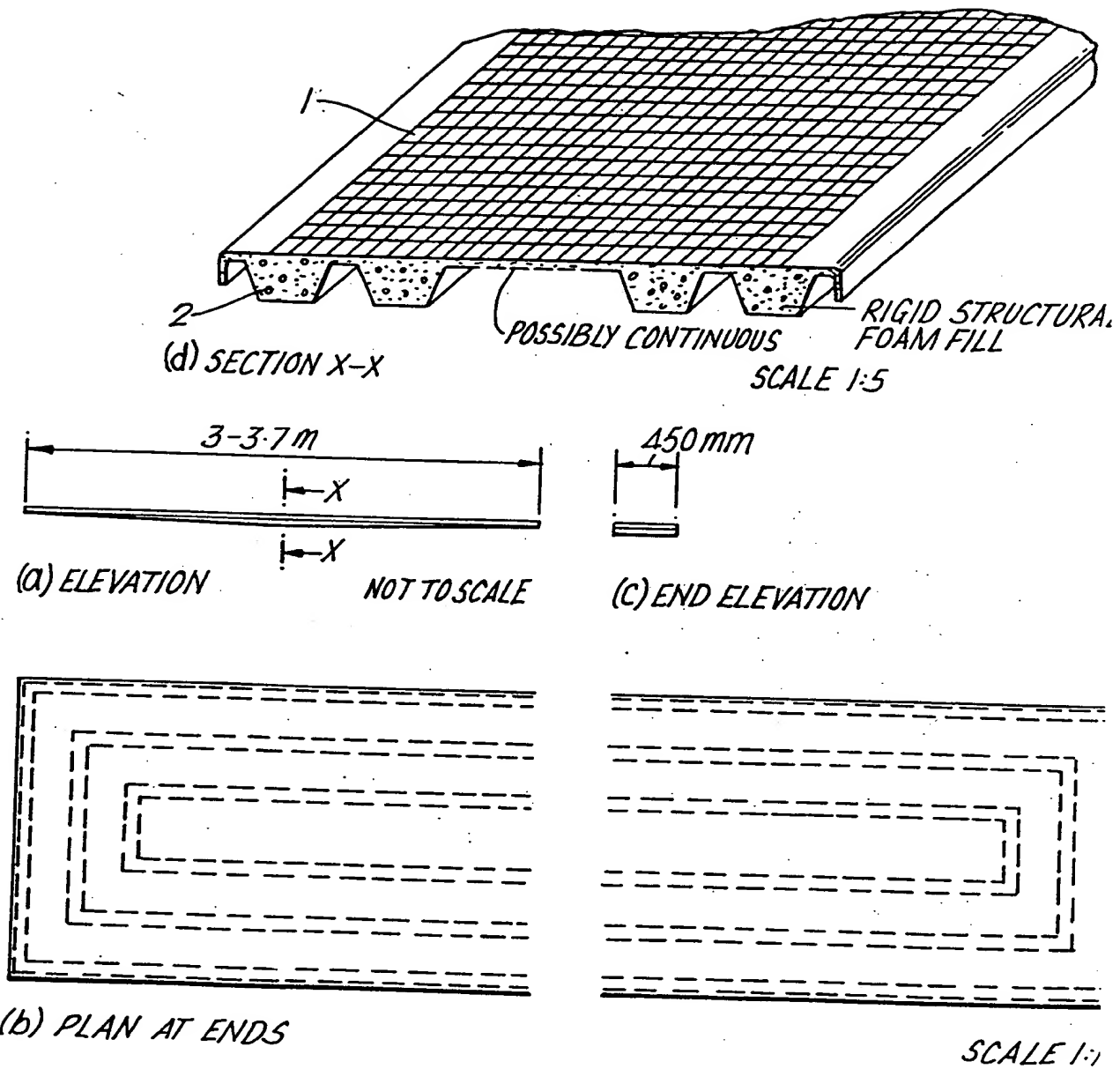
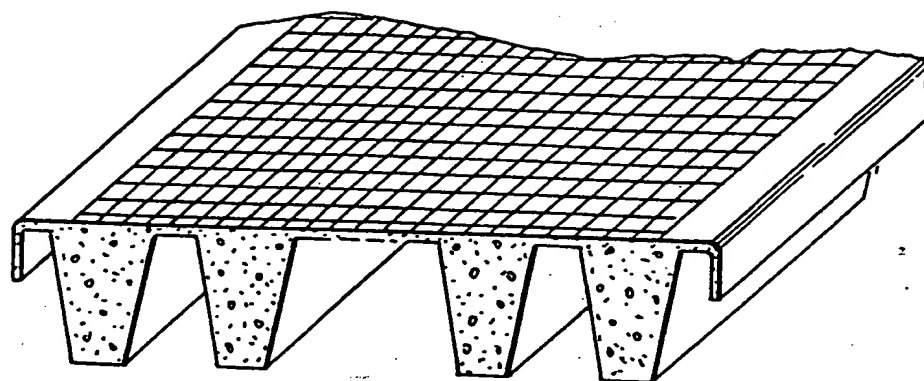
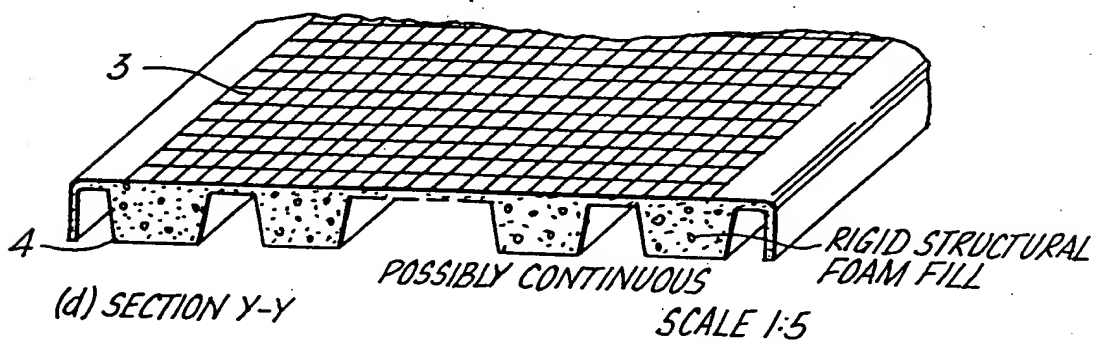


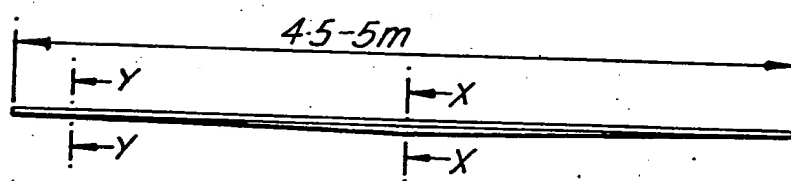
Fig. 2.



(e) SECTION X-X

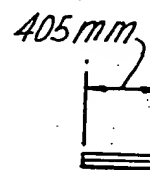


(d) SECTION Y-Y

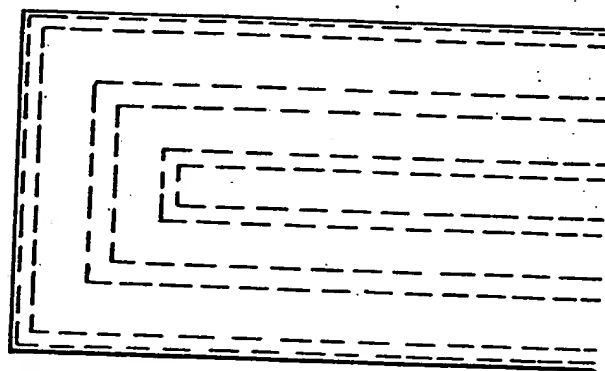


(a) ELEVATION

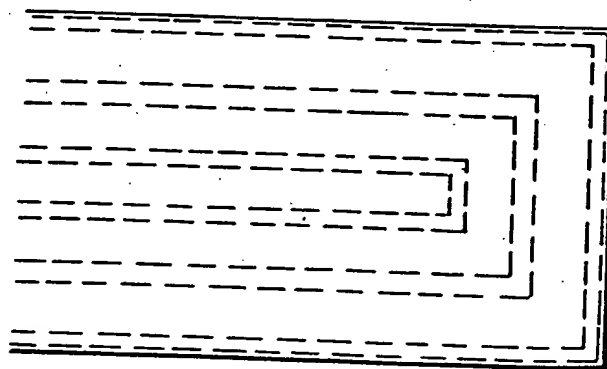
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(c) END ELEVATION



(b) PLAN AT ENDS



SCALE 1:10

SPECIFICATION

Building Boards

This invention relates to structural members, in particular to load-supporting boards.

In the building and construction industries very wide use is made of so-called scaffold boards. These are pieces of wood generally of dimensions 15 to 25 centimetres by 2 to 4 centimetres by standard lengths, e.g. 1.5, 2.5, 3, 4 and 5 metres. The boards are usually simply formed by sawing planks to the desired size and capping each end with a metal strip.

Such boards are generally heavy and can be difficult to handle on site. They generally suffer from the adverse affects of the weather and additionally vary quite considerably in their strength, particularly in the case of lengths of board including knots in the wood. Although building boards are produced to high standards of quality, they are subject to abuse and failure of building boards is a not uncommon occurrence leading to accidents on building sites. Quite clearly the potential for serious accidents in such circumstances is substantial.

According to the present invention there is provided a structural member comprising an elongate channel section web having attached to the inside of the channel a second elongate multi-channel section web, both webs being formed from glass fibre reinforced plastics sheet material.

The multi-channel section web may be attached directly or indirectly or both to the channel section web, preferably by a chemical structural bonding process, though other means of attachment may be used. Most preferably both webs are formed and affixed to one another during forming so that the resin of the glass fibre reinforced plastic cures together to form a very strong bond between the two webs.

The elongate channel section web may accommodate one or more than one multi-channel section web, or the multi-channel section web may be made up of a plurality of single-channel section webs. The channels may be left hollow or filled, e.g. with a rigid structural foam such as a rigid polyurethane foam.

The structural components of the invention may be produced in a very wide variety of forms. One such form is a builders or scaffold board. In this form the structural member presents substantial advantages compared with conventional wooden scaffold or builders boards. The boards may be rapidly produced to consistent standards of quality. Glass fibre reinforced plastics is an exceptionally weather resistant material. The weight of the board is reduced compared to a similar size wooden board and by careful design, particularly of the multi-channel section web, the overall strength of the board may be substantially greater than that of a similar size wooden board.

In an alternative form, a building board according to the invention comprises a multi-channel web the channel depth of which is greater in the central region of the board than towards its ends.

Structural members according to the present invention may be constructed as other load-supporting members for example staging, shuttering, or the like for use in the building and construction industries and in analogous situations.

The invention is illustrated by way of example with reference to the accompanying drawings in which:—

Figure 1 is a view of the first embodiment; and Figure 2 is a view of an alternative embodiment.

Referring to Figure 1 this shows a building board in various views. On the same scale, Figures 1a, b and c show elevation plan and end-on views of the board. On an enlarged scale Figure 1d is the perspective view of the board cut at section line X—X indicated on Figure 1a. As can be seen from Figure 1d, the board consists of a main channel section 1 which has affixed to its inside two 2-channel sections, both of glass fibre reinforced plastic. The channel sections are filled with a rigid structural foam.

The upper surface of section 1 shown cross-hatched has a relief pattern on it in order to give a good grip when the board is trodden on.

Figure 2 shows a board similar to Figure 1 but slightly longer and having two 2-channel members 4 adhered directly inside main channel member 3.

On an enlarged scale Figures 2a and e are perspective views of the board cut at section lines Y—Y and X—X comprising a double channel web, the depth of which is greater in the centre than the ends. This configuration is useful where longer boards are required with a greater safe working load. Such boards are useful for forming staging, temporary flooring, roofing and the like.

Claims

1. A structural member comprising an elongate channel section web having attached to the inside of the channel a second elongate multi-channel section web, both webs being formed from glass fibre reinforced plastics sheet material.

2. A structural member according to claim 1, wherein the webs are attached together by chemical structural bonding process.

3. A structural member according to claim 1, wherein the webs are formed prior to curing of the resin reinforcement and attached to one another so that on curing the resin of the glass fibre reinforced plastics cures to bond the two webs together.

4. A structural member according to any one of claims 1 to 3 and in the form of a builders or scaffold board.

5. A structural member substantially as
hereinbefore described with reference to Figure 1
of the accompanying drawings.

6. A structural member substantially as
5 hereinbefore described with reference to Fi
of the accompanying drawings.

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